

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A wireless LAN system comprising:
 - at least one base station;
 - at least one wireless LAN terminal connected to said base station via a wireless LAN;
 - and
 - a packet transmission system for transmitting a packet between said base station and said at least one wireless LAN terminal via the wireless LAN, said packet transmission system comprising:
 - sorting means for sorting received packets into prioritized packets and non-prioritized packets;
 - accumulating means for accumulating the prioritized packets sorted by said sorting means;
 - capsulating means for capsulating at least one of the packets accumulated in said accumulating means into at least one capsulated packet; and
 - transmitting means for transmitting said capsulated packet capsulated by said capsulating means.
2. (previously presented): The wireless LAN system according to claim 1,

wherein said packet transmission system further comprises arbitrating means for transmitting delay request information for delaying transmission of packets from said base station to said wireless LAN terminal such that the packet transmission does not overlap with other terminals, thereby arbitrating transmission of packets from said wireless LAN terminal to said base station so as not to cause a collision thereof.

3. (previously presented): The wireless LAN system according to claim 1,
wherein said wireless LAN terminal is associated with a PCF mode, and said base station sets a NAV time and gives timing provided to transmit said capsulated packet, to said wireless LAN terminal.

4. (previously presented): The wireless LAN system according to claim 1,
wherein said packet transmission system further comprises means for adjusting a period for transmitting said capsulated packet according to a number of real time sessions active via said base station.

5. (previously presented): The wireless LAN system according to claim 1,
wherein said packet transmission system further comprises means for collecting CODEC minimal periods corresponding to all of said wireless LAN terminals connected to each of said base stations and setting the longest of said CODEC minimal periods of all of said wireless terminals connected to each respective base station as a transmission period of each capsulated packet for said respective base station.

6. (previously presented): The wireless LAN system according to claim 1, further comprising:

an IP exchanger having said packet transmission system;

a table in which IP addresses of the wireless LAN terminal connected to every said base station and information indicative of whether said at least one wireless LAN terminal is able to receive encapsulated packets are registered; and

means for performing control for allowing said IP exchanger to encapsulate prioritized packets based on the information registered in said table and causing said IP exchanger to transmit said encapsulated packet, if transmission destination IP addresses of received packets respectively correspond to IP addresses of said wireless LAN terminal and said wireless LAN terminal is able to receive said encapsulated packets, and allowing said IP exchanger to transmit the received packets to said base station without encapsulation if said wireless LAN terminal is not able to receive said encapsulated packets.

7. (previously presented): The wireless LAN system according to claim 1,

wherein said packet transmission system further comprises:

arithmetic means for computing use efficiency of a general queue for accumulating the non-prioritized packets, using a predetermined arithmetic expression; and

control means for changing coefficients of the arithmetic expression according to a state of accumulation of the general queue, thereby controlling a value of the use efficiency computed by said arithmetic means.

8. (original): The wireless LAN system according to claim 7,
wherein said predetermined arithmetic expression is represented as follows:

$$RTT = (\alpha \times K \times 01d_RTT) + ((1 - \alpha) \times \text{New_Round_Time_Sample})$$

$$0 \leq \alpha < 1, 0 < K \leq 1$$

where 01d_RTT indicates an RTT value up to date, New_Round_Time_Sample indicates the time from the transmission of the latest TCP packet to the reception of an ACK, and K and α indicate coefficients, and

said control means changes the value of the coefficient K according to the state of accumulation of the general queue.

Claims 9-17 (canceled).

18. (previously presented): A packet transmission system comprising:
sorting means for sorting received packets into prioritized packets and non-prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating the packets accumulated in said accumulating means;
and

transmitting means for transmitting the packet encapsulated by said encapsulating means, wherein said transmitting means transmits the encapsulated packet in matching with a CODEC period, the transmitting means transmitting the encapsulated packet in a period T that satisfies $d \leq T \leq C$ where the CODEC period is C and the minimum period necessary for terminal reception is d .

Claims 19-25 (canceled).

26. (previously presented): A base station including a packet transmission system which comprises:

sorting means for sorting received packets into prioritized packets and packets other than the prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one encapsulated packet; and

transmitting means for transmitting said capsulated packet capsulated by said capsulating means.

27. (previously presented): A wireless LAN terminal including a packet transmission system which comprises:

sorting means for sorting received packets into prioritized packets and packets other than the prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one capsulated packet; and

transmitting means for transmitting said capsulated packet capsulated by said capsulating means.

28. (previously presented): The wireless LAN terminal according to claim 27, wherein said sorting means further sorts the prioritized packets into moving pictures and voice packets.

29. (previously presented): The wireless LAN terminal according to claim 27, wherein only when the received packets are UDP and IP ports coincide with IP ports registered in advance respectively, said sorting means sorts the received packets into the prioritized packets.

30. (previously presented): The wireless LAN terminal according to claim 27, wherein said sorting means sets queues to general packets other than the prioritized packets every MAC addresses.

31. (previously presented): The wireless LAN terminal according to claim 27, wherein said transmitting means transmits prioritized encapsulated packets with general packets being respectively interrupted between the prioritized encapsulated packets.

32. (previously presented): A packet transmission system comprising:

sorting means for sorting received packets into prioritized packets and packets other than the prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one encapsulated packet; and

transmitting means for transmitting said encapsulated packet capsulated by said capsulating means.

33. (previously presented): The packet transmission system according to claim 32, wherein said transmitting means transmits said encapsulated packet in matching with a CODEC period.

34. (previously presented): The packet transmission system according to claim 32, wherein said sorting means further sorts the prioritized packets into moving picture packets and voice packets, and said capsulating means capsulates the prioritized packets into moving picture capsulated packets and voice capsulated packets.

35. (previously presented): The packet transmission system according to claim 32,
wherein only when the received packets are UDP and IP ports coincide with IP ports
registered in advance respectively, said sorting means sorts the received packets into the
prioritized packets.
36. (previously presented): The packet transmission system according to claim 32,
wherein said sorting means sorts general packets, which are packets other than the
prioritized packets, into queues for each MAC address.
37. (previously presented): The packet transmission system according to claim 32,
wherein a capsulated packet transmission period of said transmitting means is counted by
an interval timer.
38. (previously presented): The packet transmission system according to claim 32,
wherein said transmitting means transmits prioritized capsulated packets with general
packets being respectively interrupted between the prioritized capsulated packets.
39. (currently amended): A packet transmission method performed by a base station,
comprising the steps of:
sorting received packets into prioritized packets and packets other than the
prioritized packets;

accumulating the sorted prioritized packets;
capsulating more than one of the accumulated packets into one capsulated packet;
and
transmitting said capsulated packet, wherein the sorting, accumulating, copulating
and transmitting steps are performed by the base station.

40. (previously presented): A wireless LAN system comprising:
at least one base station;
at least one wireless LAN terminal connected to said base station via a wireless LAN;
and
a packet transmission system for transmitting a packet between said base station and said
at least one wireless LAN terminal via the wireless LAN, said packet transmission system
comprising:
sorting means for sorting received packets into prioritized packets and non-prioritized
packets;
accumulating means for accumulating the prioritized packets sorted by said sorting
means;
capsulating means for capsulating more than one of the packets accumulated in said
accumulating means into one capsulated packet; and
transmitting means for transmitting said capsulated packet capsulated by said capsulating
means.

41. (new): A packet transmission method performed by a wireless terminal, comprising the steps of:

sorting received packets into prioritized packets and packets other than the prioritized packets;

accumulating the sorted prioritized packets;

capsulating more than one of the accumulated packets into one capsulated packet;

and

transmitting said capsulated packet, wherein the sorting, accumulating, copulating and transmitting steps are performed by the wireless terminal.